

Section-A

Multiple Choice Questions (MCQ's)

Q-01: Choose the correct answer for each from the given option.

- (i) $\begin{bmatrix} 5 & 6 \\ 0 & 7 \end{bmatrix}$ is a _____ matrix.
- (a) Diagonal (b) Scalar (c) Rectangular (d) Column
- (ii) The mean of 30 observations is 100, their sum is _____
- (a) 900 (b) 1000 (c) 1500 (d) 3000
- (iii) The polynomial expression $-\frac{1}{4} + 2x + 5$ w.r.t the terms is called _____
- (a) Monomial (b) Binomial (c) Trinomial (d) None
- (iv) $\log_a 1 =$ _____
- (a) 1 (b) a (c) 0 (d) 10
- (v) An inscribed angle of a major arc is _____
- (a) Acute (b) Obtuse (c) 90° (d) None of these
- (vi) $x^3 y^6 + 125 =$ _____
- (a) $(xy^2 - 5)(x^2 y^4 + 5xy^2 + 25)$ (b) $(xy^2 + 5)(x^2 y^4 + 5xy^2 + 25)$
(c) $(xy^2 + 5)(x^2 y^4 + 5xy^2 - 25)$ (d) $(xy^2 - 5)(x^2 y^4 - 5xy^2 + 25)$
- (vii) The sub-duplicate ratio of 4 : 9 is _____
- (a) 16:81 (b) 2:3 (c) Both (a) & (b) (d) None of these
- (viii) $\cos 60^\circ =$ _____
- (a) $\frac{1}{\sqrt{3}}$ (b) $\sqrt{3}$ (c) $\frac{\sqrt{3}}{2}$ (d) 1
- (ix) $(A \cup B)^1 =$ _____
- (a) $(A \cap B)^1$ (b) $A^1 \cup B^1$ (c) $A^1 \cap B^1$ (d) None of these
- (x) An angle with measure greater than 90° is called _____ angle.
- (a) Right (b) Congruent (c) Acute (d) Obtuse
- (xi) $x + 1 = 0$, is a _____ equation.
- (a) Quadratic (b) Linear (c) Non-linear (d) Irrational
- (xii) In triangle, ABC, $m\angle B = 90^\circ$ then $a^2 + c^2 =$ _____
- (a) a^2 (b) $-a^2$ (c) $-b^2$ (d) None
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- (xiii) $\sqrt[n]{x^m} =$ _____
- (a) x^{mn} (b) $x^{n/m}$ (c) x^{m+n} (d) $x^{m/n}$
- (xiv) Line segment joining the vertex and to the mid-point of the opposite side of triangle is called _____
- (a) Altitude (b) Hypotenuse (c) Median (d) None of these
- (xv) The characteristic of $\log 0.0000225$ is _____
- (a) 4 (b) 5 (c) -4 (d) -5
- (xvi) $(a + b)^2 + (a - b)^2 =$ _____
- (a) $4ab$ (b) $-4ab$ (c) $2(a^2 + b^2)$ (d) $2(a + b)^2$
- (xvii) The order of $\begin{bmatrix} a \\ b \end{bmatrix}$ is _____
- (a) 2×1 (b) 1×2 (c) 1×1 (d) 2×2
- (xviii) (3, -2) is in _____ quadrant.
- (a) First (b) Second (c) Third (d) Fourth
- (xix) If $A = \begin{bmatrix} 6 & 4 \\ 3 & 2 \end{bmatrix}$, then $|A| =$ _____
- (a) 6 (b) 4 (c) 2 (d) 0
- (xx) $|-5|$, absolute value of -5 is _____
- (a) -5 (b) ± 5 (c) 5 (d) None